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THE

PLOTTER

EDITED BY: DICK WAGNER
CHAIRMAN: SID WYNCOOP
V/CHAIRMAN: DICK WAGNER
SECRETARY: JACK ARMSTRONG
TREASURER: ROD GOWEN
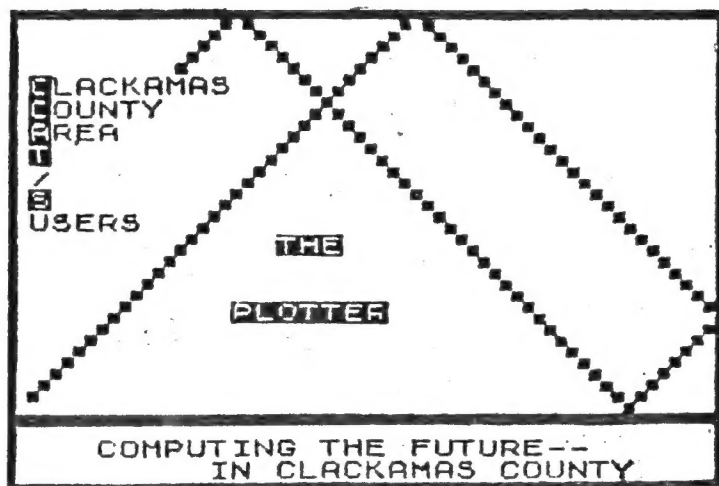PR OFFICER: BOB EVANS
LIBRARIAN: JAMES EDWARDS
****

MEETING

The NOVEMBER meeting will be:

on: FRI., NOVEMBER 7, 1986
at: 7:30 P.M.
in: COMMUNITY ROOM
    FAR WEST FEDERAL S & L
    OREGON CITY SHOPPING CENTER

****

WHAT YOU WILL
  FIND IN THIS
    ISSUE-

COMPUTING THE FUTURE--
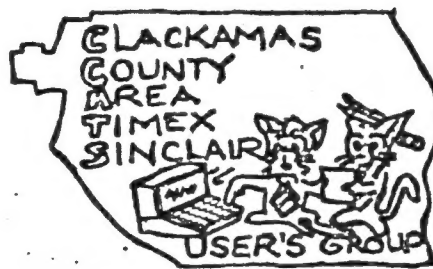IN CLACKAMAS COUNTY

Chairman's
    Corner

I have good news and bad news this month. The good news is we have a librarian! (See Secretaries' minutes). Thank You James Edwards.

The bad news is that no one is using the library and that several items are missing. If you have an overdue item, return it now--no questions asked.

If you are not using the library you are 'missing the boat'. We have amassed volumes of useful tips and ideas. Check it out!

I have also been asked by PATS, our neighboring user group, about the chances of a consolidation of efforts. More on this at the next meeting.

Happy Holloween!

SPECIAL NOVEMBER MEETING

Dick Wagner

At the September meeting members voted that the November meeting would have demonstrations of the various word processor systems being used by CCAT/S members. Well, this is the meeting. The idea was to have working systems set up so members would see what was being used to meet the needs of the individual. There could be a side benifit for some who may be experiencing problems.

We should have a display of that early system, the TS 1000 with a 2040 or ZX printer and cassette recorder. Then go from there with the various combinations of components members are using.

Likewise there are probably a half a dozen word processor programs in use, maybe more.

We can set up probably 12 systems with the 6 good tables at the meeting room. Bring a card table if that fits your needs. This will requre extension cords as there are only 4 double outlets (8 recepticles) so be sure to bring some kind of extension cord to tap another multioutlet box.

If a member cannot dismantle the home system or doesn't wish to move printers, TV, etc, then get in touch with Rod Gowen, 655-7484, to see if you can use some other system that matches yours. Anyway, it would be helpful to let Rod know what you are bringing or will need.

Members who want to upgrade their equipment, try another program, or even get started with word processing, won't want to miss this rare opportunity to see what it is all about. Maybe this will entice some members who have not been attending meetings to get started again.

NOTICE

The November meeting date is the 7th. The December meeting is back to the second Friday.

SECRETARY'S SECRETS

by Jack Armstrong

Sid Wyncoop called for the meeting to start at 7:40 and announced that we have a new librarian: James Edwards. Tne library is still kept at Rod's house, and checkouts and returns can still be made there.

Duane Hewitt brought a guest, Don Johnson. Don has several different kinds of computers and enjoys working on hardware problems.

Rod announced that Galen Bench has rejoined our group. He gave the treasurer's report, outlining the various expenditures, including sums for subscriptions to various newsletters, including one for FD 68 and Computer Trader magazine. Dick gave a report on the expenditures for mailing costs and reminded the group that we get many publications from various groups and urged the members to take advantage of the storehouse of knowledge we have at hand. There followed a vigorous discussion about the libray and the checkout proced ures. It was suggested that some changes may be advisable to make the library more workable, such as more time for checkouts. It was suggested that material may be kept for longer periods, such as meeting to meeting.

Dick Wagner reminded the gathering that next month's meeting will feature a "Show and Tell" type clinic on word processing and the various systems and programs are to be demonstrated. All of those interested should bring their equipment and their programs. Tables will be set up to accomodate.

Merle commented on his work on an alarm system utilizing his TS 1000 with a Byteback interface. Tim Woods brought a selection of books that he offered with a discount. One was the Robotics book. Rod reported on Jim Howells bulletin board system which has 8 lines open. Non-subscribers can log on if there is at least open lines. He also announced QL kit specials for $139 and a new special low price for the ready-to-go QL for $210. The meeting adjourned at 8:45.

FROM THE EDITOR'S DESK

Our CCAT/S organization is moving right along with many interesting ideas and projects. Members who have not been attending meetings have sure missed many ideas about using our computers. There are many more programs and add-on equipment now available than during the time of Timex activity. The ZX 81,TS 1000 and TS 1500 users have not been forgotten as programs and new equipment continues to surface.

There is one thing that is apparent and that is if a user of this equipment is to really make use of it, it is necessary to purchase the essental add-ons. After all, it was important to obtain additional memory such as a 16k Ram Pack, and the 2040 printer to obtain a printed output. It is also essential to subscribe to at least one magazine that caters to these computers. And don't forget that there are some fine suppliers out there who can help with programs and equipment.

If the reader had dreams of using the little computer for remote control, operating alarm systems, and even delving into robotics, but never got around to it, meetings are a good place to find out about how-to and sources of information. So much has happened in the way of books and magazine articles the reader will be surprised.

So, if your attendance has been found wanting, you just might find a good reason to renew your interest.

NOTICE

It is that time of the year to start considering our slate of officers for 1987. Elections are held at the December meeting. This means that nominations are at the November meeting. Ballots are sent out with the December PLOTTER to MEMBERS ONLY so returns are received at the December meeting.

This is your chance to control the destiny of CCAT/S so participate with a good ballot return.

COMMENTS ON COMPUSERVE
by: ROD GOWEN
CIS# 70436,1542

CIS: That stands for: COMPUSERVE INFORMATION SERVICE. The definition is for those of you not familiar with the service.

BASICS-PART 7- SETTING YOUR USER OPTIONS.

Once you log on to CIS, you will find that it goes much quicker if you have preset your options. We discussed one of them last time, the PERSONAL MENU. This time I will just quickly run through the steps involved in setting your CIS PROFILE and you user options on the TS forum.

After logon, enter "T" to get the main CIS menu. Here we choose #1 SUBSCRIBER ASSISTANCE. From the next menu, choose #7, CHANGE YOUR USER PROFILE. From here it is a simple matter to follow the prompts and set your profile to your liking. BE SURE TO SET YOUR TERMINAL TYPE TO VIDTEX. After entering the data, it will ask you if the changes are (P)ERMANENT or FOR THIS VISIT ONLY, (TEMPORARY). If you fail to press "P" then you will have to set these each time you log on.

On the FORUM, there is an option #7 also. Use it to set your option while on the FORUM. Once you have entered the "7", you will see a menu of options to be set. All that is needed is to enter the # of the one you wish to set and follow the prompts. When you pick the SUBTOPIC option, it will display all of the SIGs on the FORUM and all you need do is press the # of the one(s) that you wish to read each time you log on and that will toggle that SIG. An asterick will appear in the brackets by that #. All others will remain empty. BE SURE TO MAKE THESE CHANGES PERMANENT!

WE HOPE THAT YOU ARE ENJOYING THIS COLUMN. AS WE NEVER HEAR FROM ANY OF YOU, WE ARE NOT SURE THAT WE ARE DOING ANY GOOD! PLEASE, LET US KNOW!

Hope to see you here-----

BITS & BYTES

by: ROD GOWEN

Heard any TS related news lately? Did you get any information in the mail from other users, user groups, or vendors that may be of interest to our readers? If so, why not share it with us? We need all of the help that we can get. Please send any info that you might have to: Rod Gowen, C/O CCAT/S, 1419 1/2 7th Street, Oregon City, OR 97045, or, phone in at: 503/655-7484, 10 AM- 10 PM weekdays. I know that the entire user group will appreciate it!

TIME DESIGNS MAGAZINE-says that it is now serving even more TS users in the U.S. since they bought out SUM magazine. If you were a subscriber of SUM, you will get TDM instead, or you will get an extension if you are already a TDM subscriber. Thanks Tim, keep up the good work.

RMG ENTERPRISES-hopes to have a new catalog ready in a few weeks. If you are interested, please call or write to the address and phone number in the ad on the back page of this newsletter.

A+ COMPUTER RESPONSE-has started to offer a QL in kit form through the dealer network as reported last month. The price is now confirmed at $139. Not bad for what you get. You get the case w/keyboard, pc board, 2 microdrives, power supply, RS232 cable, RGB cable, User manual (excl. sections on Psion SW), a short Tech Guide and an assembly manual. There are also 2 blank cartridges. Where else can you get a 68000 based computer for that price?!

QUANTUM LEVELS-is the newest QL magazine on the market. Have you seen it yet? It is being produced by the same people who gave us PROFILE and PROFILE UPDATES, as well as COMPUTER UPDATES, TOM WOODS. It will be bi-monthly. It looks to be a real nice magazine. If you need more info, just give me a call at 655-7484.

ARROW SOFTWARE!-Never heard of it? Well, you will! I think that we will see a few nice things coming from this label for the 2068. It is the label of one of our own members. In fact, he is now our Librarian! JAMES EDWARDS is his name. The first title to be on the market from him is now available from RMG, SOUNDESIGN. This is a nice utility to design sound effects and musical effects. We wish him well!

S&K SOFTWARE-is another one of our own. Syd Wyncoop owns this name. He is responsible for KRUNCHER and a space adventure game called ANDRO-MEDA 3. He has just produced another little gem called THE TRACER. This is a utility that allows you to watch what the program is doing, line by line, as it is running! The lines show in the bottom 2 lines on the screen. I just wish that I would have had a tool like this when I was trying to learn BASIC. This one is also an exclusive with RMG.

WORD PROCESSORS-will be the point of our NOVEMBER meeting. We want to put on a demonstration of the various word processing programs that are around for all of our computers. Any of you that are willing to demo the program that you use, PLEASE CALL ME, ROD GOWEN, AT 655-7484 BEFORE 11/3 SO WE CAN COORDINATE WHO IS DOING WHAT WITH WHAT.

TS HORIZONS LIVES!!-We had thought that perhaps it had died! All at once, out of nowhere, we get #20!!!! It is the July/Aug issue! Only 2 months late! At the rate they are going, they will ultimately die, as who will want to subscribe to a magazine that, over a period of over 3 years has only managed 20 monthly (?) issues? What advertiser is going to take a chance that his ad will be seen when he wants it to be seen? I don't see many sticking it out. They also opened up a new can of worms by putting controversial, NON-COMPUTER RELATED material in the magazine. (If you want more on this, the Library has copies of TSH) We hate to see them go. Let's hope they clean house and get their act together!

FULL SCREEN DUMP ON YOUR 2040 PRINTER

Syd Wyncoop

Have you ever wished you could copy a full screen to your 2040 printer? I have.

It is not very difficult to generate print on the lower screen however, the ROM copy routine only dumps the first 22 lines to the printer. As I have created many worls of art that I wished to save, I have found the copy command very unsatisfactory.

The fix is simple. The full disassembly is in figure 1 and is almost an exact copy of the ROM routine. If you have HOT-Z, you can save some typing by copying the routine from 2562 (0A02h) to 2592 (0A20h) and patching it. Otherwise, you will need to enter the entire hex dump in figure 2. If you are using the Aerco disc drive, you need only POKE 2564,192 and you are in business! (you must be in bank switched RAM, i.e. OUT 244,1).

The new routine can be located anywhere you can find 37 unused bytes. It is called with a RANDOMIZE USR address where address is the location of the first byte in our new routine.

You can also copy only a portion of the screen by adjusting the number at your address plus 2 (the third byte of the routine). The number should be evenly divisable by eight to avoid problems as it is only convenient to copy full character lines with this routine.

For those of you you who understand machine code, the LD HL, 4000h instruction can be replaced with a JP 0A05h. For the rest of us, I have included the full annotated routine. That's enough explanation, here it is....

Figure 1

```
;*************************
;*                       *
;* Revised Copy Command  *
;*                       *
;*************************
;
copy_line equ 0A4Ah
;
Org    equ ?????      ;????? = your address
;
Enter  DI             ;we prefer no
                      ;interruptions
       LD B, C0h      ;# of pixel lines to
                      ;copy
       LD HL, 4000h   ;start of display
                      ;file
```

```
Loop   PUSH HL        ;save them
       PUSH BC        ;          CALL copy_line
;send pixel line to
                      ;printer
       POP BC         ;retrieve line # and
       POP HL         ;d_file address
       INC H          ;update d-file
                      ;address and
       LD A,H         ;check if in same
       AND 07         ;third of screen
       JR NZ,NxtLn    ;loop back if so
       LD A,L         ;else update address
       ADD A,20h      ;to next character
       LD L,A         ;line or next third
                      ;of screen
       CCF            ;check if left last
       SBC A,A        ;third of screen
       AND F8h        ;A=F8h or 00h
       ADD A,H        ;complete updating
       LD H,A         ;of address
NxtLn  DJNX,Loop      ;loop until B lines
                      ;are copied
       LD A,04        ;turn off printer
       OUT (FBh),A    ;motor
       EI             ;now accepting
                      ;interruptions
       RET            ;done, return to
                      ;Basic
```

Figure 2

Hex Dump

```
F3 06 C0 21 00 40 E5 C5
CD 4A 0A C1 E1 24 7C E6
07 20 0A 7D C6 20 6F 3F
9F E6 F8 84 67 10 E7 3E
      04 D3 FB FB CD
```

NEWSLETTERS INDEX

Our organization has quite a file of newsletters obtained on an exchange basis. Some of these groups are no longer in existance or do not communicate. The library has a file of these newsletters, listing what was considered to be of greatest interest. If the reader has a subject then various newsletters carrying this subject can be located. These newsletters are filed in holders so the reader will check out the full file, not just the one or several of interest.

BOSTON COMPUTER SOCIETY
DATA BUS-DAYTON MICRO ASSN.
HAMPTON ROADS T/S USER GROUP

KEYBOARDS TAS BAM USERS' GROUP
INFO-G.U.T.S. (MEXICO)
L.I.S.T.
PATS-PORTLAND AREA T/S GROUP
PC WORLD NEWS
QL REPORT
QUARTERS-WMJ DATA SYSTEMS
SINCUS NEWS
SMUG BYTES
SOUTHWEST TIMES
STUN
SYNAPSE
SINC-LINC
SINCWARE NEWS
TIMELINEZ
TIMEX SINCLAIR USERS GROUP
TSS NEWS NOTES
T/S USER GROUP OF CINCINNATI
T S USER GROUP MILE HIGH CHAPTER
TRIANGLE SINCLAIR USER GROUP
VICTORIA/SYNC ASSN
ZX APPEAL VANCOUVER SINCLAIR USERS
    GROUP
ZX BROAD SHEET
ZX WORLD NEWS BULLETIN

There will be a later list of
magazines and books, also filed by
contents of interest.

This filing system is the updated
PRO/FILE that gives a fast retrieval
of data. Files may be check out from
RMG Enterprises, Rod Gowen, 1419 1/2
7th St. Oregon City. Phone 655-7484.

AUDIOSCAN

Dick Wagner

This program from ZX APPEAL JULY 86
issue (originally by J. Keene in
Hampton Road TS User Group
newsletter), is interesting. It
generates a line graph, or a bar
chart, or point graph of audio
sounds produced from your tape
recorder or a microphone and
amplifier.

There are limits to the character of
the input. It will accept
frequencies from 60 Hz up 10,000 Hz
with a constant amplitude but it
seems to drop off above this. The
input works best if it drops to near
zero periodically otherwise an out
of range error shows up. The
horizontal sweep takes about 20
seconds so the resolution is not
great.

For reference, a 5 volt peak to peak
signal (sin wave) takes up 70% of
the screen. Zero is at the top
line.

Once a signal is accepted the trace
jumps downward and the variations in
signal level are shown. Try it with
a program on cassette.

```
100 REM audioscan
102 DEF FN a(l)=1+INT (.5+l/30)
103 GO SUB 410
105 GO TO 200
110 DRAW INK FN a(l/1.5);x-n,IN
T (-l+y)/1.5: LET x=n: LET y=l:
RETURN
120 DRAW INK FN a(l/1.5);0,-l/2
: RETURN
200 PAPER 0: INK 7: BRIGHT 1: C
LS
210 PRINT AT 0,10;'Audioscan'
220 PRINT AT 2,2;'This program
gives a graphic    representatio
n of a signal      input to the
2068 ear socket..'
225 PRINT AT 7,2;'Load tape or
other signal       source to the
 ear socket and    select option
:'
230 PRINT AT 12,5;'1--line grap
h';AT 13,5;'2--bar graph';AT 14,
5;'3--point graph'
240 INPUT INVERSE 1;'enter opti
on (1 to 3)';q: IF q<1 OR q>3 TH
EN GO TO 240
250 CLS : PRINT #1; INVERSE 1;'
space to freeze scan': LET i$=''
: LET x=0: LET y=0
255 FOR n=0 TO 255: LET l=USR t
one: PLOT n,INT (l/1.5)
260 IF q<3 THEN GO SUB 100+(q*1
0)
265 LET i$=INKEY$: IF i$=' ' TH
EN GO TO 300
270 NEXT n
275 GO TO 250
300 PRINT #1; INVERSE 1;'m=menu
r=start e=end': PAUSE 0
310 LET i$=INKEY$: IF i$='m' TH
EN RUN
320 IF i$='r' THEN GO TO 270
330 IF i$='e' THEN STOP
340 GO TO 300
400 DATA 1,0,255,17,0,0,219,254
,203,119,32,1,19,16,247,66,75,20
1
410 LET tone=65368
420 FOR n=tone TO tone+17: READ
d: POKE n,d: NEXT n: RETURN
425 STOP
430 SAVE 'audioscan': RUN
```

E AND R

This program for the TS 1000, 1500 and 2068 computers calculates resistance values in electrical circuits, based on voltage and current. You can also determine voltage or current flowing thru a known resistance. For the 1000 and 1500 computers, delete line 6 and the BEEP part of line 7001.

```
   1 REM PROGRAM BY
   2 REM DUANE HEWITT
   3 REM 1986
   5 CLS
   6 BORDER 0
   7 GO SUB 6000
   8 CLS
  10 PRINT AT 1,5;"ENTER FORMULA
YOU NEED"
  30 PRINT AT 4,8;"MENU"
  40 PRINT AT 6,5;"1- E=I*R"
  50 PRINT AT 8,5;"2- I=E/R"
  60 PRINT AT 10,5;"3- R=E/I"
  65 PRINT AT 15,0;"R=RESISTANCE
E=VOLTAGE I=CURRENT"
  70 INPUT A
  80 IF A>3 THEN GO TO 70
  90 IF A=1 THEN GO TO 1000
 100 IF A=2 THEN GO TO 2000
 120 IF A=3 THEN GO TO 3000
1001 CLS
1005 PRINT AT 1,15;"E=I*R"
1010 PRINT AT 2,10;"ENTER VALUE
OF I"
1015 PRINT AT 15,0;"R=RESISTANCE
E=VOLTAGE I=CURRENT"
1020 INPUT B: PRINT AT 4,0;"CURR
ENT =     ";B;"        AMP"
1030 PRINT AT 2,3;"ENTER VALUE O
F RESISTANCE"
1040 INPUT C: PRINT AT 7,0;"RESI
STANCE=     ";C;"       OHMS"
1050 LET D=B*C
1060 PRINT AT 10,0;"VOLTAGE =
  ";D;"        VOLTS"
1070 PRINT AT 15,0;"R=RESISTANCE
E=VOLTAGE I=CURRENT"
1075 PRINT AT 20,0;"PRESS ANY KE
Y TO CONTINUE"
1099 PAUSE 4E4
1105 GO TO 4010
2001 CLS
2005 PRINT AT 1,15;"I=E/R"
2006 PRINT AT 15,0;"R=RESISTANCE
E=VOLTAGE I=CURRENT"
2010 PRINT AT 2,10;"ENTER VALUE
OF E"
2020 INPUT B: PRINT AT 4,0;"VOLT
AG =     ";B;"        VOLTS"
2030 PRINT AT 2,3;"ENTER VALUE O
F RESISTNCE "
2040 INPUT C: PRINT AT 7,0;"RESI
STANCE =    ";C;"       OHMS"
2045 PRINT AT 2,3;"
                   "
2050 LET D=B/C
2060 PRINT AT 10,0;"CURRENT =
  ";D;"        AMPS"
2070 PRINT AT 20,0;"PRESS ANY KE
Y TO CONTINUE"
2100 PAUSE 4E4
2105 GO TO 4010
3001 CLS
3005 PRINT AT 1,15;"R=E/I"
3006 PRINT AT 15,0;"R=RESISTANCE
E=VOLTAGE I=CURRENT"
3010 PRINT AT 2,10;"ENTER VALUE
OF E"
3020 INPUT B: PRINT AT 4,0;"VOLT
AGE =     ";B;"        VOLTS"
3030 PRINT AT 2,10;"ENTER VALUE
OF I"
3040 INPUT C: PRINT AT 7,0;"CURR
ENT =     ";C;"         AMPS"
3045 PRINT AT 2,10;"
                   "
3050 LET D=B/C
3060 PRINT AT 10,0;"RESISTANSE =
  ";D;"        OHMS"
3100 PAUSE 4E4
3105 GO TO 4010
4010 PRINT AT 15,0;"DO YOU WANT
ANOTHER FORMULA ?
    "
4012 PRINT AT 20,0;"
            "
4015 PRINT AT 17,15;"Y/N"
4020 INPUT W$
4030 IF W$="Y" OR W$="y" THEN CL
S : GO TO 10
4490 CLS
4500 PRINT AT 17,5;"IT'S NICE TO
 BE NEEDED "
4501 PRINT AT 19,10;"THANK YOU"
4505 PAUSE 4E4
4506 STOP
6000 PRINT AT 1,0;"THIS PROGRAM
IS VERY HANDY IF  YOU WANT TO F
IGURE A LITTLE OHMS LAW AND DO N
OT KNOW ALL THER IS TO KNOW ABOU
T OHMS LAW."
6005 PRINT AT 6,0;"FOLLOW THE ME
NU"
6010 PRINT AT 9,0;"CHOOSE THE FO
RMULA FOR ""E""IF THEUNKNOWN IS
VOLTAGE"
6020 PRINT AT 13,0;"CHOOSE THE F
ORMULA FOR ""I""IF THEUNKNOWN IS
 CURRENT"
6030 PRINT AT 17,0;"CHOOSE THE F
ORMULA FOR ""R""IF THEUNKNOWN IS
 RESISTANCE"
6035 PRINT AT 20,0;"PUSH ANY KEY
 TO CONTINUE"
6040 PAUSE 4E4
6050 RETURN
7000 SAVE "ohms law" LINE 5001
7001 BEEP .5,8: GO TO 1
```

-- TRY THIS--

Key in program and RUN. To get the program back after BREAK just key in INK 0.

```
  15 INK 0: FOR a=0 TO 10*PI STE
P PI/20
  20 PLOT 127+(2*a)*SIN a,87+(2*
a)*COS a
  30 NEXT a
  35 INK 7
  40 FOR a=10*PI TO 0 STEP -PI/2
0
  50 PLOT 127+(2*a)*SIN a,87+(2*
a)*COS a
  60 NEXT a: GO TO 10
```

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   TO THE MONTH AD IS TO RUN
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```
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Oregon city, OR 97045
```

```
ROD GOWEN (TREAS/LIB)
1419 1/2 7TH STREET
OREGON CITY, OR 97045
A0003:12<86/ML
```